

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for adding ~~nodes~~ devices to a wireless mesh network, the method comprising:
determining if an open area is present in the vicinity of a wireless device in the wireless mesh network;
if an open area is not present, taking no action to add devices to the wireless mesh network;
if an open area is present, adjusting an antenna sensitivity pattern of ~~one or more nodes~~ the wireless device in the wireless mesh network to exhibit ~~spatial selectivity~~ a directional sensitivity pattern having increased range in a direction of the open area in comparison with an omnidirectional sensitivity pattern to enable discovery of a wireless ~~node~~ device that is out of range of ~~an~~ the omnidirectional antenna sensitivity pattern;
transmitting a query using the adjusted antenna sensitivity pattern; and
if a response to the query transmitted using the adjusted antenna sensitivity pattern is received from a responding wireless ~~node~~ device within a predetermined time period, adding the responding wireless ~~node~~ device to the mesh network.
2. (Currently amended) The method of claim 1 further comprising adjusting the ~~transmission~~ antenna sensitivity pattern one or more times to enable the antenna sensitivity pattern to cover a predetermined spatial area.
3. (Original) The method of claim 1 wherein the predetermined time period is fixed.
4. (Original) The method of claim 1 wherein two or more nodes in the wireless mesh network adjust the antenna sensitivity pattern in a coordinated manner.
5. – 7. Canceled.

8. (Currently amended) A wireless device configured to operate in a wireless mesh network, the wireless device comprising:

a processor;

a memory coupled to the processor;

a module operable via the processor, the module configured to determine if an open area is present in the vicinity of the wireless device in the wireless mesh network, if an open area is not present, to take no action to add devices to the wireless mesh network, and if an open area is present, to adjust an antenna sensitivity pattern of the wireless device to exhibit ~~spatial selectivity~~ a directional sensitivity pattern having increased range in a direction of the open area in comparison with an omnidirectional sensitivity pattern to enable discovery of a wireless ~~node device~~ that is out of range of ~~an~~ the omnidirectional antenna sensitivity pattern;

a transmitter configured to transmit a query using the adjusted antenna sensitivity pattern;
and

a receiver configured to determine whether a response to the query transmitted using the adjusted antenna sensitivity pattern is received from a responding wireless device in a predetermined time period and to add the responding wireless device to the mesh network.

9. (Currently amended) The wireless device of claim 8 wherein the module is configured to adjust the ~~transmission~~antenna sensitivity pattern one or more times to enable the antenna sensitivity pattern to cover a predetermined spatial area.

10. (Original) The wireless device of claim 8 wherein the predetermined time period is fixed.

11. (Original) The wireless device of claim 8 wherein the wireless device coordinates with one or more additional wireless devices in the wireless mesh network to adjust the antenna sensitivity pattern.

12. – 14. Canceled.

15. (Currently amended) A computer readable medium having computer-executable instructions to perform acts for adding ~~nodes~~ devices to a wireless mesh network, the acts comprising:

determining if an open area is present in the vicinity of a wireless device in the wireless mesh network;

if an open area is not present, taking no action to add devices to the wireless mesh network;

if an open area is present, adjusting an antenna sensitivity pattern of ~~one or more nodes~~ the wireless device in the wireless mesh network to exhibit ~~spatial selectivity~~ a directional sensitivity pattern having increased range in a direction of the open area in comparison with an omnidirectional sensitivity pattern to enable discovery of a wireless ~~node~~ device that is out of range of ~~an~~ the omnidirectional antenna sensitivity pattern;

transmitting a query using the adjusted antenna sensitivity pattern; and

if a response to the query transmitted using the adjusted antenna sensitivity pattern is received from a responding wireless ~~node~~ device within a predetermined time period, adding the responding wireless ~~node~~ device to the mesh network.

16. (Currently amended) The computer readable medium of claim 15 wherein the acts further comprise adjusting the ~~transmission~~ antenna sensitivity pattern one or more times to enable the antenna sensitivity pattern to cover a predetermined spatial area.

17. (Original) The computer readable medium of claim 15 wherein the predetermined time period is fixed.

18. (Original) The computer readable medium of claim 15 wherein two or more nodes in the wireless mesh network adjust the antenna sensitivity pattern in a coordinated manner.

19. (New) The method of claim 1, wherein determining the presence of an open area comprises:

listening for wireless devices with the antenna sensitivity pattern of the wireless device adjusted to exhibit spatial selectivity in a plurality of directions;

noting a direction of each detected wireless device to provide a pattern of detected wireless devices;

comparing the pattern of the detected wireless devices with a criteria for an open area; and

identifying an open area if the pattern meets the criteria.

20. (New) The wireless device of claim 8, wherein determining the presence of an open area comprises:

listening for wireless devices with the antenna sensitivity pattern of the wireless device adjusted to exhibit spatial selectivity in a plurality of directions;

noting a direction of each detected wireless device to provide a pattern of detected wireless devices;

comparing the pattern of the detected wireless devices with a criteria for an open area; and

identifying an open area if the pattern meets the criteria.

21. (New) The computer readable medium of claim 15, wherein determining the presence of an open area comprises:

listening for wireless devices with the antenna sensitivity pattern of the wireless device adjusted to exhibit spatial selectivity in a plurality of directions;

noting a direction of each detected wireless device to provide a pattern of detected wireless devices;

comparing the pattern of the detected wireless devices with a criteria for an open area; and

identifying an open area if the pattern meets the criteria.